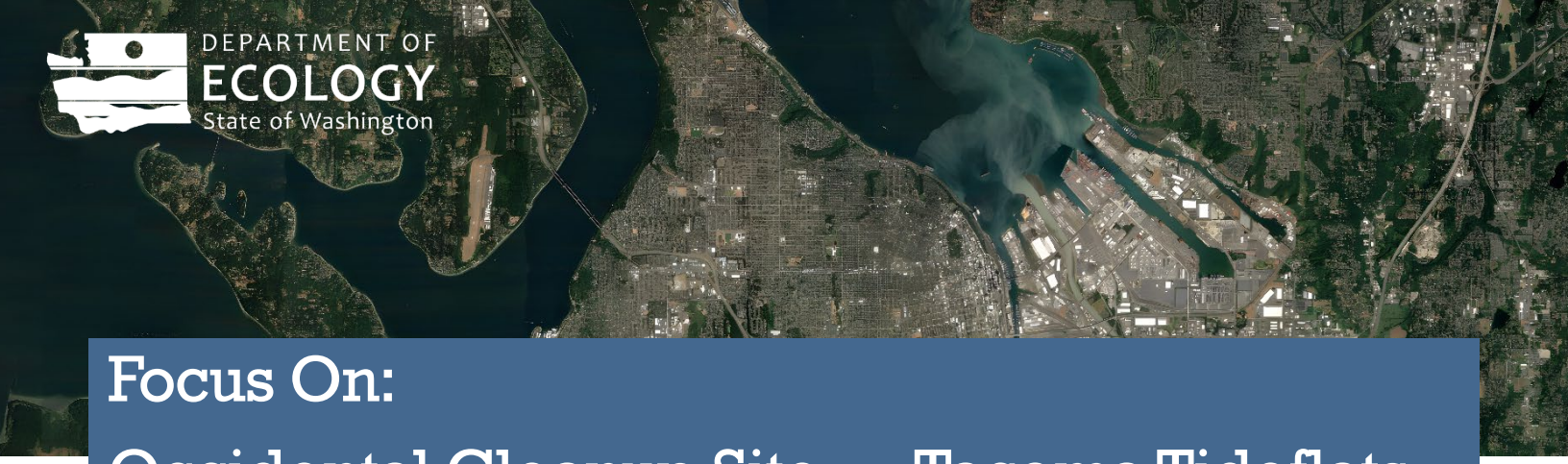

DEPARTMENT OF ECOLOGY
State of Washington

Focus On:
Occidental Cleanup Site — Tacoma Tideflats

About Occidental

The Occidental Chemical Corporation (Occidental) property is located at 605 E. Alexander Avenue in the Tacoma Tideflats. From 1929 to 2002, the property was used for chemical production, shipbuilding, and military operations. Occidental produced toxic chemicals, including:

- Chlorine.
- Caustic soda (sodium hydroxide).
- Trichloroethene.
- Tetrachloroethene.

An estimated 457 million pounds of solvents were produced, and about 1 million pounds of solvents contaminate site groundwater.

After 2002, Occidental removed most of the aboveground features of the manufacturing plant. Only the groundwater treatment plant and an office building remain.

What's happening now?

We're preparing a draft cleanup action plan for public comment in 2023. The plan includes:

- Our plan to address the contamination.
- Cleanup standards that Occidental must meet.
- A project schedule.

How big is the site?

A "site" includes everywhere the contamination ended up. This site goes beyond Occidental's property, and covers about 90 acres, or 70 football fields. There are three plumes of contamination in the groundwater:

1. A plume of **chlorinated volatile organic compounds (CVOCs)** is about 160 feet below ground surface and extends beyond the property line.
2. A plume of contamination with **elevated pH** (8.5 to more than 13) is about 100 feet below ground surface and is mostly within the property line.
3. An **anthropogenic density plume (ADP)** is a mixture of caustic soda and dissolved silica that is heavier than water. The ADP sinks and displaces the CVOC plume.

What is your risk?

Due to its depth and location, the groundwater contamination does not affect homes, public places, public drinking water, or activities such as swimming, paddleboarding, or boating.

Contamination can enter your body four ways:

- By breathing dust.
- By breathing vapor. (Vapor pollution moves from air spaces in contaminated soil into indoor air.)
- Touching soil.
- Swallowing soil or groundwater.

The Occidental property is zoned for industrial use only. No businesses currently operate there. Only authorized people may enter the site and neighboring properties. Workers onsite must follow a safety plan that limits their contact with contaminated soil, shallow groundwater, sediment near the shoreline, and indoor air.

Who oversees and pays for cleanup?

Ecology oversees the investigation and cleanup of groundwater, surface water, and soil. The Environmental Protection Agency oversees cleanup of the mouth of the Hylebos, Commencement Bay, and sediments. Together, both agencies direct the cleanup process.

Occidental pays for the cleanup—all of it!

Figure 1. Testing groundwater at the Occidental site.

The cleanup action plan

The proposed plan has six key elements (see Figure 2, next page).

1. Early action source treatment:

Treats soil, groundwater, and soil vapor by:

- Extracting groundwater to dewater contaminated shallow soil for treatment.
- Flushing contaminated soil with air and removing solvent vapors for treatment.

These activities reduce hazardous substances at the source, thus protecting indoor and ambient air.

2. A vertical barrier wall:

- Contains shallow groundwater, and contains the pH plume.
- Provides bank stabilization.
- Improves the efficiency of the groundwater extraction system.

3. An asphalt barrier:

- Eliminates direct-contact exposure.
- Reduces infiltration of rainwater.

4. Strategic groundwater pumping and treatment.

- Removes contaminant mass.
- Contains the plume.

5. Institutional controls:

- Limit or prohibit activities that interfere with the cleanup remedy.

6. Long-term monitoring:

- Provides routine soil vapor and groundwater monitoring.

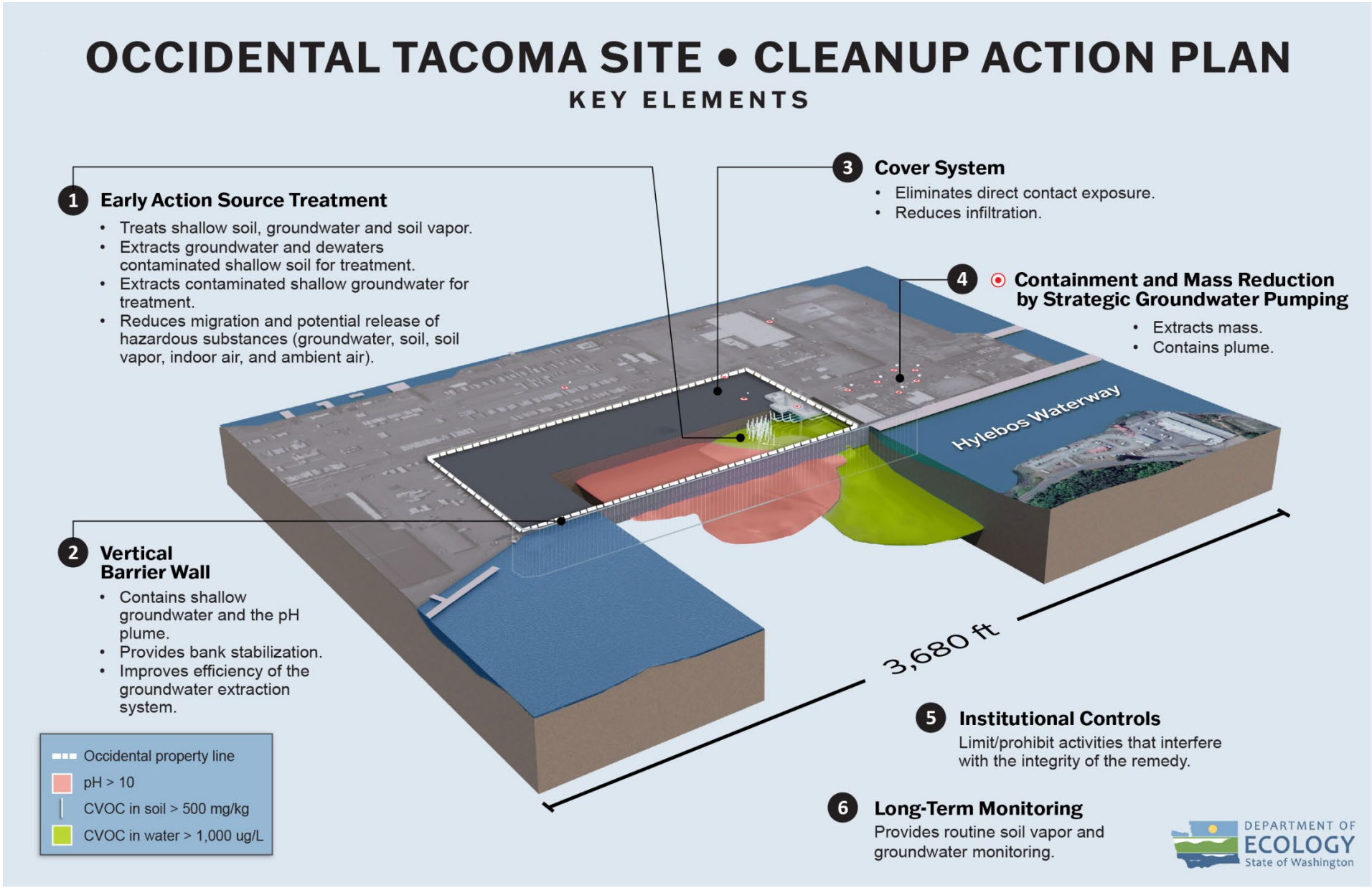

Figure 2. Key elements of the Occidental site cleanup plan. (CVOC = chlorinated volatile organic compounds.)

We hired an independent consultant to evaluate this cleanup action plan for human and ecological risks. The evaluation showed that our surface water standards will protect human health, wildlife, and resident fish that could be a food source for other animals.

The Tacoma Tideflats are at risk for tsunamis, earthquakes, and volcanic eruptions. Emergency planning is a key requirement for all industries here. In response to public concern, we required Occidental to prepare an emergency cleanup plan for their new groundwater treatment plant.

Learn more and stay informed!

- To request a free interpreter, please contact Janelle Anderson by email (janelle.anderson@ecy.wa.gov) or telephone (425-301-6454).
- Check our Occidental cleanup webpage[1] for more about the upcoming comment period.
- Take our survey.[2] Your response will help us keep you informed during the cleanup.

Figure 3. The Occidental property and adjacent Hylebos Waterway.

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To request an ADA accommodation, contact Ecology by phone at 360-407-6700 or email at hwtrpubs@ecy.wa.gov, or visit ecology.wa.gov/accessibility.
For Relay Service or TTY call 711 or 877-833-6341.

[1] ecology.wa.gov/OccidentalSite

[2] www.surveymonkey.com/r/TKNCQKL